



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Group Art Unit 1644

Image \$1644

In re Patent Application of

Richard B. Mazess, et al.

Application No. 09/402,636

Confirmation No.: 6232

Filed: April 26, 2000

Examiner: Huynh, Phuong N.

"TARGETED THERAPEUTIC DELIVERY OF
VITAMIN D COMPOUNDS"

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Signature

March 11, 2004
Date of Signature

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PURSUANT TO 37 CFR §1.97(c)

Commissioner for Patents
P.O. Box 1450
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Sir:

The Examiner's attention is directed to the references which are listed on the attached Forms PTO/SB/08A and PTO/SB/08B, copies of which are attached. This Statement is also being accompanied by a check for \$180 in payment of the fee required under 37 CFR §1.17(p). Please charge or credit Deposit Account No. 50-0842 with any shortage or overpayment of the required fee. This paper submission is being filed simultaneously with two electronic IDS submissions and all are considered to be part of the same, single IDS. Citation of these references is respectfully requested.

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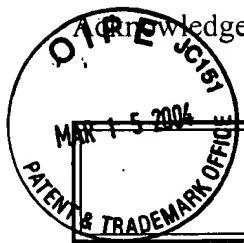
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Respectfully submitted,

Jeffrey D. Peterson
Jeffrey D. Peterson
Reg. No. 49,038

File No. 17620-9277

Michael Best & Friedrich LLP
One South Pinckney Street
P. O. Box 1806
Madison, WI 53701-1806
(608) 257-3501

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Electronic Version 1.1

Stylesheet Version v1.1.1

**Title of
Invention****TARGETED THERAPEUTIC DELIVERY OF VITAMIN D COMPOUNDS**

Submission Type: Information Disclosure Statement

Application Number: 09/402636

*09/4

EFS ID: 56947

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First Named Applicant: Richard Mazess

Attorney Docket Number: 0176209277

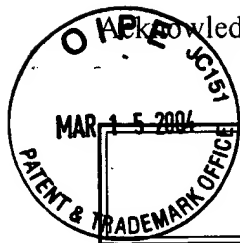
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Title of
Invention

TARGETED THERAPEUTIC DELIVERY OF VITAMIN D COMPOUNDS

Submission Type: Information Disclosure Statement

Application Number: 09/402636

*09/40

EFS ID: 56950

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First Named Applicant: Richard Mazess

Attorney Docket Number: 0176209277

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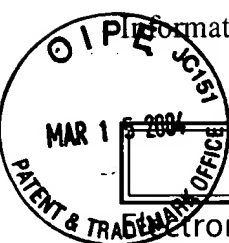
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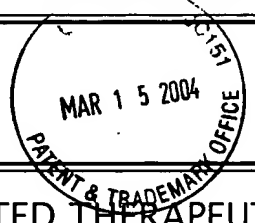
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ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18
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Title of Invention	TARGETED THERAPEUTIC DELIVERY OF VITAMIN D COMPOUNDS
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Application Number: 09/402636 *09/402636*
Confirmation Number: 6232
First Named Applicant: Richard Mazess
Attorney Docket Number: 0176209277
Examiner: Phuong H. Huynh
Search string: (6537982).pn.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
	1	6537982	2003-03-25	Bishop et al			

Remarks

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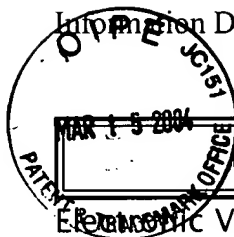
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Title of
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Application Number: 09/402636

09/402636

Confirmation Number: 6232

First Named Applicant: Richard Mazess

Attorney Docket Number: 0176209277

Examiner: Phuong H. Huynh

Search string: (2383446 or 3697559 or 3741996 or 3907843 or
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5661025 or 5691328 or 5739271 or 5795882 or
6309666 or 6521608).pn.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
	1	2383446	1941-06-04	Calcott et al			
	2	3697559	1972-10-10	DeLuca et al			
	3	3741996	1973-06-26	DeLuca et al			
	4	3907843	1975-09-23	DeLuca et al			
	5	4160803	1979-07-10	Potts			

	6	4195027	1980-03-25	DeLuca et al
	7	4202829	1980-05-13	DeLuca et al
	8	4234495	1980-11-18	DeLuca et al
	9	4260549	1981-04-07	DeLuca et al
	10	4292250	1981-09-29	DeLuca et al
	11	4362710	1982-12-07	Watanabe
	12	4508651	1985-04-02	Baggiolini et al
	13	4554106	1985-11-19	DeLuca et al
	14	4555364	1985-11-19	DeLuca et al
	15	4588716	1986-05-13	DeLuca et al
	16	4661294	1987-04-28	Holick et al
	17	4689180	1987-08-25	DeLuca et al
	18	4698328	1987-10-06	Neer et al
	19	4717721	1988-01-25	DeLuca et al
	20	4833125	1989-05-23	Neer et al
	21	4866048	1989-09-12	Calverley et al
	22	4902481	1990-02-20	Clark et al
	23	5063221	1991-11-05	Nishii et al
	24	5104864	1992-04-14	DeLuca et al
	25	5141719	1992-08-25	Fernwood et al
	26	5157135	1992-10-20	Tsuji et al
	27	5205989	1993-04-27	Aysta
	28	5219528	1993-06-15	Clark
	29	5232836	1993-08-03	Bouillon et al
	30	5264184	1993-11-23	Aysta et al
	31	5264618	1993-11-23	Felgner et al
	32	5334740	1994-08-02	Takahashi et al
	33	5338532	1994-08-16	Tomalia et al
	34	5372996	1994-12-13	Labrie
	35	5403831	1995-04-04	DeLuca et al
	36	5417923	1995-05-23	Bojanic et al
	37	5488120	1996-01-30	Knutson et al
	38	5527524	1996-06-18	Tomalia et al

	39	5554386	1996-09-10	Groman et al
	40	5576309	1996-11-19	Tamura et al
	41	5597575	1997-01-28	Breitbarth
	42	5602116	1997-02-11	Knutson et al
	43	5614513	1997-03-25	Knutson et al
	44	5637742	1997-06-10	Valles et al
	45	5661025	1997-08-26	Szoka, Jr. et al
	46	5691328	1997-11-25	Peterson et al
	47	5739271	1998-04-14	Sridhar et al
	48	5795882	1998-08-18	Bishop et al
	49	6309666	2001-10-30	Hatano et al
	50	6521608	2003-02-18	Henner et al

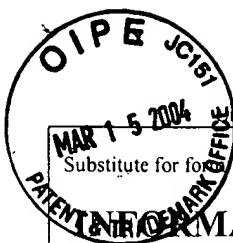
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Signature

Examiner Name	Date



Substitute for form 1449B/PTO				Complete if Known	
				Application Number	09/402,636
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Filing Date	April 26, 2000
				First Named Inventor	Richard B. Mazess
				Group Art Unit	1644
				Examiner Name	Phuong N. Huynh
				Attorney Docket Number	017620-9277
Sheet	1	of	5		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

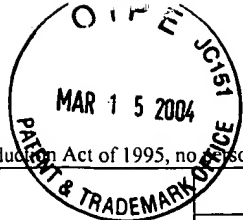
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		Barton, D. et al., "Synthetic Uses of Steroidal Ring & Diene Protection: 22,23-Dihydroergosterol," <i>JCS Perkin I</i> , (1976) pp. 821-826.
		Beer, T. et al., "Weekly High-Dose Calcitriol and Docetaxel in Metastatic Androgen-Independent Prostate Cancer," <i>Journal of Clinical Oncology</i> , (Jan. 2003) 21:1:123-128.
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Substitute for form 1449B/PTO				Complete if Known	
				Application Number	09/402,636
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Filing Date	April 26, 2000
				First Named Inventor	Richard B. Mazess
				Group Art Unit	1644
				Examiner Name	Phuong N. Huynh
				Attorney Docket Number	017620-9277
Sheet	2	of	5		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

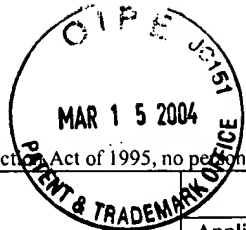
Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
		Foldes, J. et al., "Long Term Treatment with $1\alpha(\text{OH})\text{D}_3$ for Postmenopausal Osteoporosis: Efficacy and Safety," <i>Osteoporosis</i> , (1987) 2:971-973.
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		Lam, H.Y. et al., <i>Science</i> , (1974) 486:1038-1040.

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Sheet

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of

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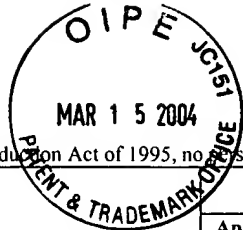
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
	Majewski, <i>et al.</i> , "Inhibition of Tumor Cell-Induced Angiogenesis by Retinoids, 1,25-Dihydroxyvitamin D ₃ and their Combination," <i>Cancer Letters</i> , (1993) 75:35-39.
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Examiner Signature	Date Considered
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Sheet	4	of	5	Attorney Docket Number	017620-9277

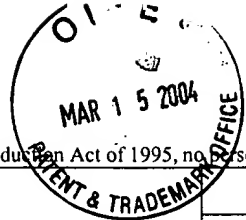
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
		Shiraki, M. et al., <i>Endocrinol. Japan</i> , (1985) 32:305-315.
		Siwinska, A. et al. "Potentiation of the Antiproliferative Effect <i>in Vitro</i> of Doxorubicin, Cisplatin and Genistein by New Analogues of Vitamin D," <i>Anticancer Research</i> , (2001) 21:1925-1929.
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		Strugnell et al., "Metabolism of a Cyclopropane-Ring-Containing Analog of 1 α -Hydroxyvitamin D ₃ in a Hepatocyte Cell Model," <i>Biochem. Pharm.</i> , (1990) 40:333-341.
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		Suzuki, Y. et al., "The Enhancement of the Chemotherapeutic Effects on Human Prostate Cancer Cell - The Combination with the Growth Factor Interaction Inhibitor (Suramin)," <i>Acta Urologica</i> (1993) 12:1215-1220, (Abstract).
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		Tachibana, Y. (Nisshin Flour Milling Co.), "Preparation of 1Beta-Hydroxyvitamin D ₂ and D ₃ ," <i>CHEMICAL ABSTRACTS</i> , (1990) 113:1:6688 Col. 2 Abstract No. 6683y.

Examiner Signature		Date Considered	
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of

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Application Number	09/402,636
Filing Date	April 26, 2000
First Named Inventor	Richard B. Mazess
Group Art Unit	1644
Examiner Name	Phuong N. Huynh
Attorney Docket Number	017620-9277

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTSExaminer
Initials

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Tanaka, Y. et al., *Endocrinology* (1973) 92:417-422.Torres, R. et al., "Etoposide Stimulates 1,25-Dihydroxyvitamin D₃ Differentiation Activity, Hormone Binding and Hormone Receptor Expression in HL-60 Human Promyelocytic Cells, *Molecular and Cellular Biochemistry*, (2000) 208:157-162.Tsuji, M. et al., "Synthesis of 22,23-Dihydro-1 α ,25-Dihydroxyvitamin D₂ and its 24R-Epimer, New Vitamin D₂ Derivatives," *Bull. Chem. Soc. Jpn.*, (1990) 63:8:2233-2238.Wang, Q. et al., "1,25-Dihydroxyvitamin D₃ and All-trans-Retinoic Acid Sensitize Breast Cancer Cells to Chemotherapy-induced Cell Death," *Cancer Research*, (April 2000) 60:2040-2048.Wang, X. et al., "Inhibition of p38 MAP Kinase Activity Up-Regulates Multiple MAP Kinase Pathways and Potentiates 1,25-Dihydroxyvitamin D₃-Induced Differentiation of Human Leukemia HL60 Cells," *Experimental Cell Research*, (2000) 258:425-437.Wientroub, S. et al. "The Dichotomy in the Effects of 1,25 Dihydroxy Vitamin D₃ and 24, 25 Dihydroxy Vitamin D₃ on Bone Gamma-Carboxyglutamic Acid-Containing Protein in Serum and Bone in Vitamin D-Deficient Rats," *Calcif. Tissue Int.*, (1987) 40:166-172.Windaus, A. et al., "Uber das Krystallisierte Vitamin D₄," *Z. Physiol. Chem.*, (1937) 247:185-188.Yu, W. et al., "Enhancement of 1,25- Dihydroxyvitamin D₃- Mediated Antitumor Activity with Dexamethasone," *J. National Cancer Inst.*, (January 1998) 90:2:134-141.Zerwekh et al., "Short-Term 1,25-Dihydroxyvitamin D₃ Administration Raises Serum Osteocalcin in Patients with Postmenopausal Osteoporosis," *J. Clin. Endocrinol. Metabol.*, (1985) 60:615-617.

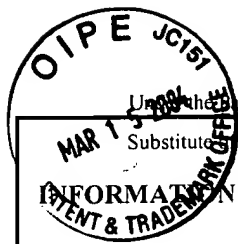
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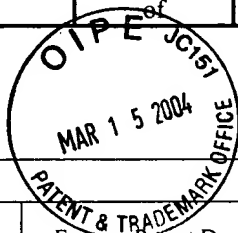
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	09/402,636		
		Filing Date	April 26, 2000		
		First Name Inventor	Richard B. Mazess		
		Group Art Unit	1644		
		Examiner Name	Phuong N. Huynh		
Sheet	1	of	1	Attorney Docket Number	017620-9277

**FOREIGN PATENT DOCUMENTS**

Examiner Initials	Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
	Belgium	877 356	Wisconsin Alumni Research Foundation	10/15/79		
	Japan	5320127	Nisshin Flour Milling Co.	09/29/93		
	Japan	6025039	Kurary Co. Ltd.	02/01/94		
	Japan	62000033	General Hospital	10/15/86		
	EP	0197514	General Hospital	10/15/86		
	EP	0390097	Nisshin Flour Milling Co.	10/03/90		
	EP	0562497	Nisshin Flour Milling Co.	09/29/93		
	EP	0503630	Kuraray Co. Ltd.	09/16/92		
	EP	0664287	Duphar International	07/26/95		
	PCT	WO 84/04527	Wisconsin Alumni Research Foundation	11/22/84		
	PCT	WO 87/00834	Leo Pharmaceutical Products, Ltd.	02/12/87		
	PCT	WO 90/10620	Wisconsin Alumni Research Foundation	09/20/90		
	PCT	WO 92/05130	Lunar Corporation	04/02/92		
	PCT	WO 92/12165	Lunar Corporation	07/23/92		
	PCT	WO 92/14493	Capelli & Paaren	09/03/92		
	PCT	WO 92/21355	Procter & Gamble	12/10/92		
	PCT	WO 93/14763	Lunar Corporation	08/05/93		
	PCT	WO 94/16711	Lunar Corporation	08/04/94		
	PCT	WO 96/40153	Bone Care International	12/19/96		

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